



Australian Government

Department of Education, Employment and Workplace Relations

HLTAN403C Provide assistance during induction and maintenance of anaesthesia

Release: 1

HLTAN403C Provide assistance during induction and maintenance of anaesthesia

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to provide assistance to the anaesthetist with the induction and maintenance of anaesthesia

Application of the Unit

Application

Work is performed under the direction of the anaesthetist and requires broad knowledge, a range of well developed skills. Individuals use discretion and judgement and take responsibility for the quality of their outputs

Client's dignity and confidentiality is maintained, and reassurance provided throughout the induction and maintenance of anaesthesia. Equipment and materials required for the anaesthetic are monitored for correct functioning and assistance provided to the Anaesthetist in identifying changes to client condition and associated fluid levels

Administration of anaesthesia may occur in various locations within the hospital environment e.g. operating theatres, emergency department, intensive care unit (ICU), radiology department

All activities are carried out in accordance with relevant Australian and New Zealand College of Anaesthetists Policy Documents, organisation policies, procedures and infection control guidelines

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in *italics* are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Assist in establishing and maintaining client's airway

- 1.1 Check *anaesthetist's requirements*
- 1.2 Check individual needs of the *client* and ensure the appropriate anaesthetic equipment is provided for the anaesthetist
- 1.3 Provide assistance to the anaesthetist as directed to position the client for establishing the airway
- 1.4 Select equipment and prepare and handle correctly and safely and in accordance with infection control guidelines
- 1.5 Provide *assistance to the anaesthetist throughout induction procedure*
- 1.6 Maintain client's airway when directed by the anaesthetist
- 1.7 Take all necessary precautions to prevent cross-infection and minimise trauma
- 1.8 Secure airway into position

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|--|--|
| 2. Monitor the performance of anaesthetic <i>equipment</i> used | 2.1 Ensure anaesthetic equipment is in working order and service records are current
2.2 Ensure warning devices are working and alarm limits are set in accordance with relevant standards
2.3 Observe anaesthetic equipment whilst in use and take action if a fault develops as directed by Anaesthetist to avoid danger to clients and staff
2.4 Follow established procedures to rectify faulty equipment |
| 3. Provide assistance in monitoring the client during induction and maintenance of anaesthesia | 3.1 Check client's physiological parameters when as directed by anaesthetist
3.2 Identify deviations from acceptable limits of the client's physiological parameters, check equipment for true reading and report to the anaesthetist
3.3 Identify signs of client discomfort, distress or adverse reaction, check equipment for true reading and report to the anaesthetist
3.4 Inform and reassure client, as appropriate, throughout the procedure |
| 4. Measure and record clients' <i>fluid balance</i> | 4.1 Accurately measure client's fluid intake and output/loss and record as directed by the anaesthetist
4.2 Promptly and accurately report any abnormal findings to the anaesthetist
4.3 Utilise <i>personal protective equipment</i> in accordance with standard and additional precautions
4.4 Dispose of waste safely and in accordance with infection control policy |
| 5. Perform <i>clinical measurements</i> when directed by the anaesthetist | 5.1 Select and prepare required equipment
5.2 Utilise personal protective equipment in accordance with additional precautions
5.3 Prepare client as required for test
5.4 Take sample as required, conduct measurement in accordance with manufacturer's guidelines and organisation policies and procedures
5.5 Record findings promptly and accurately
5.6 Dispose of waste safely and in accordance with infection control policy |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Anaesthetic procedures relevant to providing assistance in anaesthesia
- Anatomy and physiology relevant to providing assistance in anaesthesia
- Boundaries of responsibilities and ability to refer problems to supervisor, anaesthetist or other appropriate health professional
- Clinical/operative procedures and the interrelationship with anaesthesia relevant to providing assistance in anaesthesia
- Fluid and electrolyte balance relevant to providing assistance in anaesthesia maintenance
- General knowledge of pathophysiology of disease relevant to providing assistance during anaesthesia
- Manual handling and client positioning techniques relevant to providing assistance in anaesthesia
- Medical terminology relevant to providing assistance in anaesthesia
- Medico-legal requirements relevant to providing assistance during anaesthesia
- Monitoring of clients' physiological systems relevant to providing assistance in anaesthesia
- Normal physiological parameters, and implications of deviation from normal, for a range of physiological functions relevant to providing assistance in anaesthesia
- Occupational health and safety and infection control procedures/regulations relevant to providing assistance during anaesthesia
- Physiology of loss of airway, the signs and symptoms, the causes and the remedial actions, including maintenance of airway manually, insertion of nasal/oral airways
- Pre-medications and their effects relevant to providing assistance in anaesthesia
- Range of equipment in current use for anaesthetic/operative procedures, knowledge of manufacturers' operating guidelines and criteria for withdrawal of faulty equipment
- Types and functions of anaesthetic equipment, their indications and limitations for use
- Types of suction equipment, its indication for use and hazards associated with usage
- Use of pain management equipment relevant to providing assistance during anaesthesia

REQUIRED SKILLS AND KNOWLEDGE

Essential skills:

It is critical that the candidate demonstrate the ability to:

- Comply with organisation policies and procedures including those of OHS and infection control, and current standards
- Establish and maintain a client's airway manually
- Identify and manage faults in anaesthetic and monitoring equipment
- Identify the different methods of airway establishment
- Monitor range of physiological parameters with reference to standard values of normal physiological function for each clients' usual parameters relevant to providing assistance in anaesthesia
- Perform clinical measurements
- Prepare anaesthetic and monitoring equipment for use
- Prepare client sites correctly to interface with equipment
- Recognise the signs and symptoms, causes and remedial actions in the event of loss of airway
- Secure an arterial/venous cannula

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Deal with conflict
- Display empathy with client and relatives
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues
- Use basic computer skills relevant to providing assistance during anaesthesia
- Use numeracy skills including the ability to complete basic arithmetic calculations, recording stock levels and statistical information
- Use oral communication skills-language competence required to fulfil job roles in a safe manner and as specified by the organisation. Assessors should look for skills in asking questions, providing clear information, listening to and understanding workplace instructions, and clarifying workplace instructions when necessary. Effective verbal and non verbal communication skills with a range of personnel within and outside of the organisation are essential. An ability to recognise and manage barriers to effective communication is also essential. Organisation may require competence in English or a community language, depending on client group
- Use problem solving skills required including an ability to use available resources
- Use reading and writing skills-literacy competence required to fulfil job roles in a safe manner and as specified by the organisation. The level of skill required involves reading and documenting clinical information and understanding complex policy and procedure

REQUIRED SKILLS AND KNOWLEDGE

manuals.

- Work with others within a team

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate this competency unit:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Observation of workplace performance is essential for assessment of this unit
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace
- Where, for reasons of safety, space, or access to equipment and resources, assessment takes place away from the workplace, the assessment environment should represent workplace conditions as closely as possible

Context of and specific resources for assessment:

- Resources essential for assessment include:
 - Access to appropriate workplace where assessment can take place
 - Simulation of realistic workplace setting for assessment
 - Relevant organisation policy, guidelines, procedures and protocols

EVIDENCE GUIDE

- Access and equity considerations:*
- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
 - All workers should develop their ability to work in a culturally diverse environment
 - In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
 - Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

- Method of assessment*
- Observation in the workplace
 - Clinical skills involving direct client care are to be assessed initially in a simulated clinical setting (laboratory). If successful, a second assessment is to be conducted during workplace application under direct supervision.
 - Written assignments/projects
 - Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice.
 - Questioning verbal and written
 - Role play/simulation

- Related units:*
- This unit can be assessed independently, however holistic assessment practice with other health services units of competency is encouraged

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Clinical procedures covers the surgical procedure and the type of anaesthetic which may include:

- General/regional/local anaesthetic and sedation
- Fiberoptic intubation
- Radiology/radiotherapy anaesthesia
- General surgery
- Gastro-intestinal surgery
- Ear, nose and throat surgery
- Gynaecological surgery
- Obstetric surgery
- Orthopaedic surgery
- Vascular surgery
- Urological surgery
- Oral/dental/maxillofacial surgery
- Cardiothoracic surgery
- Neurosurgery
- Plastic surgery
- Trauma/emergency surgery
- Ophthalmic surgery

RANGE STATEMENT

Clients requiring anaesthetics include:

- Neonates
- Infants
- Children
- Adolescents
- Adults
- Elderly
- Pregnant women
- Impaired
- Traumatised
- Unconscious
- Immuno-compromised
- Male
- Female

Anaesthetist's requirements may include:

- Procedure to be undertaken
- Equipment and materials for procedure

Airway equipment must include:

- Range of nasal and oral endotracheal tubes
- Tracheostomy tubes
- Range of laryngoscopes
- Fibreoptic bronchoscopes
- Difficult intubation equipment
- Intubation aids
- Oropharyngeal/nasal/laryngeal airways
- Suction equipment for oesophageal and tracheal suction
- Throat packs
- Self inflating bag
- Anaesthetic circuits
- Face masks
- Connectors
- Filters
- Video equipment

RANGE STATEMENT

Assistance provided during induction procedure must include:

- Cricoid pressure
- Laryngeal manipulation

Types of induction procedures must include:

- Rapid sequence induction
- Oral and nasal route
- Tracheostomy

RANGE STATEMENT

Equipment may include:

- Anaesthetic machine and components, including alarms and scavenger
- Ventilator and components
- Vaporisers or other systems designed for delivery of inhalation anaesthetic agents
- Breathing systems and attachments
- Oxygen masks
- Laryngoscopes
- Fibreoptic bronchoscopes
- Intubation aids, including difficult intubation equipment
- Artificial airways
- Suction equipment for oesophageal and tracheal suction

Monitoring equipment includes:

- Electrocardiography (ECG)
- Pulse oximetry
- Non-invasive and invasive blood pressure monitoring
- Temperature monitoring
- Central venous pressure (CVP) monitoring
- Intravascular monitoring
- Gas analysers, including oxygen, carbon dioxide and anaesthetic agent
- Expired/inspired volume/pressure
- Neuromuscular transmission
- Cardiac output monitoring
- Cerebral activity monitoring
- Stethoscopes, including oesophageal
- Doppler

Other equipment includes:

- Infusion equipment, including rapid infusion equipment
- Warming/cooling equipment for client and intravenous fluids
- Equipment to minimise heat loss
- Tourniquets and exsanguinators
- Neuromuscular function monitor
- Calf stimulators/compression devices
- Humidifiers
- Materials for subarachnoid epidural or regional nerve

RANGE STATEMENT

blocks

Physiological parameters must include:

- Blood pressure and pulse
- Temperature
- Circulation
- Respiration
- Oxygenation
- Inspired/expired gases
- Airway pressure
- Neuro-muscular function
- Level of consciousness

Fluids may include:

- Blood
- Urine
- Gastro-intestinal fluids
- Irrigation
- Intravenous
- Intra arterial

Personal protective equipment may include:

- Gown
- Gloves
- Mask
- Protective eyewear
- Apron

Clinical measurements may include:

- Arterial blood gas measurement
- Blood sugar level measurement
- Haemoglobin measurement
- 12 lead electrocardiograph
- Coagulation times
- Manual blood pressure and pulse

RANGE STATEMENT

Client positions may include:

- Supine
- Prone
- Lithotomy/Lloyd Davis
- Trendelenberg/reverse
- Lateral
- Jack knife
- Sitting
- Specific positioning related to the operative/clinical procedure

Protecting client from injury may include:

- Support/padding
- Careful movement of joints
- Avoiding sudden and abnormal movements
- Protection from excessive heat loss

Unit Sector(s)

Not Applicable